

CLAIMS

1. A composition for treating a keratinous material comprising:

- (a) a cosmetically acceptable medium,
- (b) at least one hydroxycarboxylic acid or a salt thereof of formula (I):



wherein,

- R represents a CO_2X group, and
- X represents a hydrogen atom or a monovalent or divalent cation derived from a transition metal, alkali metal, alkaline-earth metal, organic amine or ammonium ion,

and,

- (c) at least one of protective agent and conditioning agent,

wherein said conditioning agent is a synthetic oil, plant oil, fluoro or perfluoro oil, natural or synthetic wax, silicone, non-polysaccharide cationic polymer, compound of ceramide type, cationic surfactant, fatty amine, or fatty acid or a derivative or mixture thereof.

2. The composition of claim 1, wherein said keratinous material is hair.

3. The composition of claim 1, wherein said monovalent or divalent cation is an alkali metal cation, alkaline-earth metal cation or divalent transition metal cation.

4. The composition of claim 1, wherein said at least one hydroxycarboxylic acid or a salt thereof of formula (I) is mucic acid, glucaric acid, mannaric acid, an alkali metal salt thereof, an alkaline-earth metal salt thereof, a transition metal salt thereof, or a mixture thereof.

5. The composition of claim 4, wherein said at least one hydroxycarboxylic acid or a salt thereof of formula (I) is mucic acid.

6. The composition of claim 1, wherein the content of

said at least one hydroxycarboxylic acid or a salt thereof of formula (I) is from 0.001% to 10% by weight relative to the total weight of the composition.

7. The composition of claim 6, wherein said content of said at least one hydroxycarboxylic acid or a salt thereof of formula (I) is from 0.001% to 5% by weight relative to the total weight of the composition.

8. The composition of claim 1, wherein said protective agent is an organic UV-screening agent, free-radical scavenger, antioxidant, vitamin or provitamin.

9. The composition of claim 8, wherein said organic UV-screening agent is a silicone or non-silicone, water-soluble, liposoluble or water-insoluble organic screening agent or mineral oxide nanoparticles wherein the surface of said mineral oxide nanoparticles has been optionally treated.

10. The composition of claim 9, wherein said surface of said mineral oxide nanoparticles has been treated to be hydrophilic or hydrophobic.

11. The composition of claim 9, wherein said water-soluble organic UV-screening agent is para-aminobenzoic acid or its salt, anthranilic acid or its salt, salicylic acid or its salt, p-hydroxycinnamic acid or its salt, sulphonic derivative of benzoxazoles or salt thereof, sulphonic derivative of benzophenone or salt thereof, sulphonic derivative of benzylidenecamphor or salt thereof, benzylidenecamphor derivative substituted with a quaternary amine or salt thereof, phthalylidene-camphorsulphonic acid derivative or salts thereof, sulphonic derivative of benzotriazole, hydrophilic polymer with a UV-photoprotective property, or a mixture thereof.

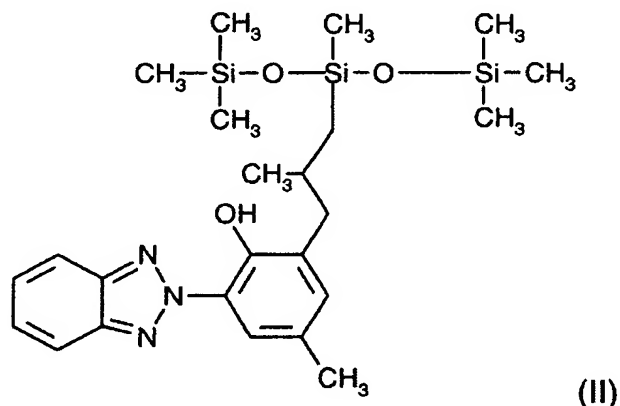
12. The composition of claim 9, wherein said liposoluble organic UV-screening agent is a p-aminobenzoic acid derivative, salicylic acid derivative, dibenzoylmethane derivative, diphenylacrylate derivative, benzofuran derivative, polymeric UV-screening agent containing one or more organosilicon residue, cinnamic acid ester, camphor

derivative, trianilino-s-triazine derivative, urocanic acid ethyl ester, benzotriazole, hydroxyphenyltriazine derivative, bis-resorcinol-dialkylaminotriazine, or a mixture thereof.

13. The composition of claim 12, wherein said p-aminobenzoic acid derivative is a p-aminobenzoic acid ester or amide.

14. The composition of claim 12, wherein said salicylic acid derivative is a salicylic acid ester.

15. The composition of claim 12, wherein said liposoluble organic UV-screening agent is octyl salicylate, 2-hydroxy-4-methoxybenzophenone, 4-tert-butyl-4'-methoxydibenzoylmethane, octocrylene, 2-ethylhexyl 4-methoxycinnamate, or the compound of formula (II)



(II)

16. The composition of claim 1, wherein said synthetic oil is polyolefin of hydrogenated or non-hydrogenated polybutene type or of hydrogenated or non-hydrogenated polydecene type.

17. The composition of claim 1, wherein said cationic polymer is a polymer comprising at least one primary, secondary, tertiary or quaternary amine group that is either a part of the main polymer chain or a side substituent directly attached thereto.

18. The composition of claim 17, wherein said cationic polymer is a cationic cyclopolymer, quaternary vinylpyrrolidone polymer, quaternary vinylimidazole polymer, or a mixture thereof.

19. The composition of claim 18, wherein said cyclopolymer is a homopolymer of diallyldimethylammonium chloride, or a copolymer of diallyldimethylammonium chloride or of acrylamide.

20. The composition of claim 1, wherein said silicone is polyorganosiloxane wherein said polyorganosiloxane is insoluble in said composition.

21. The composition of claim 20, wherein said silicone is non-volatile polyorganosiloxane chosen from polyalkylsiloxane, polyarylsiloxane, polyalkylarylsiloxane, silicone gum, silicone resin, polyorganosiloxane modified with an organofunctional group, or a mixture thereof.

22. The composition of claim 21, wherein

(a) said polyalkylsiloxane is:

- polydimethylsiloxane containing a trimethylsilyl end group
- polydimethylsiloxane containing a dimethylsilanol end group or
- polyalkyl(C₁-C₂₀)siloxane;

(b) said polyalkylarylsiloxane is:

- linear and/or branched polydimethylmethylphenylsiloxane or polydimethyldiphenylsiloxane with a viscosity of between 1×10^{-5} and 5×10^{-2} m²/s at 25°C;

(c) said silicone gum is polydiorganosiloxane with average molecular weight of between 200 000 and 1 000 000, wherein said polydiorganosiloxane is used alone or in the form of a mixture in a solvent;

(d) said silicone resin is the group consisting of R₃SiO_{1/2}, R₂SiO_{2/2}, RSiO_{3/2} and SiO_{4/2}, wherein R represents a hydrocarbon-based group containing 1 to 16 carbon atoms or a phenyl group; and

(e) said polyorganosiloxane modified with an organofunctional group is polyorganosiloxane comprising at least one organofunctional group

attached via a hydrocarbon-based radical.

23. The composition of claim 22, wherein said silicone gum is:

- polydimethylsiloxane,
- polydimethylsiloxane/methylvinylsiloxane,
- polydimethylsiloxane/diphenylsiloxane,
- polydimethylsiloxane/phenylmethylsiloxane,
- polydimethylsiloxane/diphenylsiloxane/methylvinylsiloxane,
- a mixture of polydimethylsiloxane hydroxylated at the chain end and cyclic polydimethylsiloxane,
- a mixture of polydimethylsiloxane gum and cyclic silicone or
- a mixture of polydimethylsiloxanes with different viscosities.

24. The composition of claim 22, wherein said polyorgansilxane modified within an organofunctional group is polyorganosiloxane comprising:

- a) a polyethyleneoxy group;
- b) a polypropyleneoxy group;
- c) a substituted amine group;
- d) an unsubstituted amine group;
- e) a thiol group;
- f) an alkoxyated group;
- g) a hydroxyalkyl group;
- h) an acyloxyalkyl group;
- i) an alkylcarboxylic group;
- j) a 2-hydroxyalkylsulphonate group;
- k) a 2-hydroxyalkylthiosulphonate group; or
- l) a hydroxyacylamino group.

25. The composition of claim 22, wherein said polyalkylsiloxane is polyorganosiloxane comprising:

- a) a trimethylsilyl end group,
- b) a dimethylsilanol end group,
- c) polyalkylarylsiloxane
- d) a mixture of two PDMSs consisting of a gum and

- an oil with different viscosities,
- e) a mixture of organosiloxanes or
 - f) a mixture of cyclic silicone and organopolysiloxane resin.

26. The composition of claim 1, wherein said compound of ceramide type is

- 2-N-linoleoylaminooctadecane-1,3-diol,
 - 2-N-oleoylaminooctadecane-1,3-diol,
 - 2-N-palmitoylaminooctadecane-1,3-diol,
 - 2-N-stearoylaminooctadecane-1,3-diol,
 - 2-N-behenoylaminooctadecane-1,3-diol,
 - 2-N-[2-hydroxypalmitoyl]aminooctadecane-1,3-diol,
 - 2-N-stearoylaminooctadecane-1,3,4-triol and in particular N-stearoylphytosphingosine,
 - 2-N-palmitoylaminohexadecane-1,3-diol,
 - bis(N-hydroxyethyl-N-cetyl)malonamide,
 - N-(2-hydroxyethyl)-N-(3-cetyloxy-2-hydroxy-propyl)cetylamine,
 - N-docosanoyl-N-methyl-D-glucamine,
- or a mixture thereof.

27. The composition of the claim 1, wherein said protective or conditioning agent is present in a concentration from 0.001% to 20% relative to the total weight of the composition.

28. The composition of claim 27, wherein said concentration is from 0.01% to 10% by weight relative to the total weight of the composition.

29. The composition of claim 1, further comprising at least one surfactant chosen from anionic, nonionic, amphoteric surfactant or a mixture thereof.

30. The composition of claim 29, wherein said at least one surfactant is present in a concentration from 0.1% to 60% by weight relative to the total weight of the composition.

31. The composition of claim 30, wherein said concentration is from 1% to 40% by weight relative to the total weight of the composition.

32. The composition of claim 31, wherein said concentration is from 5% to 30% by weight relative to the total weight of the composition.

33. The composition of claim 1, wherein said composition is a shampoo, a conditioner, a composition for permanent-waving, relaxing, dyeing or bleaching the hair, a rinse-out composition to be applied before and/or after a dyeing or bleaching operation, a rinse-out composition to be applied before and/or between the two steps of a permanent-waving or hair-relaxing operation, or a washing composition for the body.

34. A method of washing a keratinous material comprising applying said composition of claim 1 to said keratinous material and then rinsing said composition from said keratinous material with water.

35. A method of treating a keratinous material comprising applying said composition of claim 1 to said keratinous material and then optionally rinsing with water.